

CLAIMS

- 5 1. A dielectric antenna comprising a substrate (9) of a dielectric material (11) and comprising a feed line (19) on a front face (13) of the substrate (9) and a ground metalization (21) on a rear face (15) of the substrate (9), which ground metalization (21) extends up to the front face (13) of the substrate (9).
- 10 2. A dielectric antenna as claimed in claim 1, characterized in that the ground metalization (21) comprises a main line (20), which is arranged on the rear face and which is aligned parallel to the feed line (19) arranged on the front face (13).
- 15 3. A dielectric antenna as claimed in claim 2, characterized in that feed line (19) and ground metalization (21) have an overlapping area (22), in which feed line (19) and ground metalization (21) or main line (20), as the case may be, come to an overlap in the case of projection of front face (13) and rear face (15) of the substrate (9).
- 20 4. A dielectric antenna as claimed in claim 3, characterized in that the overlapping area (22) is smaller than 70%, preferably smaller than 50% of the length of the substrate (9) in the direction of extension of the feed line (19).
- 25 5. A dielectric antenna as claimed in claim 2, characterized in that a metalization (19, 21) is arranged on the front face (13) and on the rear face (15) of the substrate on the central axis of the substrate (9).
- 30 6. A dielectric antenna as claimed in claim 1, characterized in that the ground metalization (21) has two arms (37, 39) on the front face (13).

7. A dielectric antenna as claimed in claim 6, characterized in that the two arms (37, 39) are arranged parallel to the feed line (19).

5 8. A dielectric antenna as claimed in claim 6 or 7, characterized in that the two arms (37, 39) of the ground metalization (21) have identical lengths on the front face (13).

9. A dielectric antenna as claimed in claim 6, characterized in that the two 10 arms (37, 39) are arranged mirror symmetrically around an axis of symmetry (35).

10. A dielectric antenna as claimed in claim 1 or 6, characterized in that the ground metalization (21) has a cross switch (29) on the rear face (15).

15 11. A dielectric antenna for mobile telecommunication comprising a substrate made of a dielectric material and a feed line (19) on a front face of the substrate (9) and a main line (20) of a ground metalization (21), aligned parallel to the feed line on the rear face (15) of the substrate (9).

20 12. A circuit board with an antenna as claimed in at least one of the above claims.

13. A PCB (5) as claimed in claim 12, characterized in that the substrate (9) of the antenna (2) is arranged perpendicular to the PCB (5).

25 14. A PCB (5) as claimed in claim 13, characterized in that the substrate (9) is suitable for arrangement in top position (41) as well as in side position (43).

30 15. A transceiver unit comprising a housing (3) and a PCB (5) as claimed in claim 10 or 11, characterized in that the antenna (2) is connected firmly to the support

with the housing (3) and is electrically connected to the PCB (5).

16. A method of manufacturing a transceiver unit with a housing (3) in which an antenna (2) comprising a substrate (9) is mounted and this antenna (2) is connected electrically to a PCB (5) through a high-frequency feeder (25) and a ground terminal (23).